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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,698	12/07/2006	Willibald Konrath	4015-5819	7114

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EXAMINER	
KASENGE, CHARLES R	

ART UNIT	PAPER NUMBER
2121	

MAIL DATE	DELIVERY MODE
02/02/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/573,698	KONRATH ET AL.	
	Examiner	Art Unit	
	CHARLES R. KASENGE	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 December 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed 10/29/08, with respect to the rejection(s) of claim(s) 15-29 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Boegh-Petersen U.S. Patent 4,707,657.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: disclosing what the "determining a rotational position" limitation is used for in the rest of the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 15-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Boegh-Petersen U.S. Patent 4,707,657.

7. Regarding claim 15, Boegh-Petersen discloses a method of manufacturing a high-frequency assembly having a plurality of components, at least one of which is frequency-specific, using an automatic assembly apparatus (col. 2 and 3, lines 66-11), the method comprising: identifying a frequency-encoding feature on a frequency-specific component (col. 2, lines 25-34); accepting the frequency-specific component for connection to the high-frequency assembly if the frequency-encoding feature indicates that the frequency-specific component is a correct component for the assembly (col. 16, lines 45-61); and rejecting the frequency-specific component for connection to the high-frequency assembly if the frequency-encoding feature indicates that the frequency-specific component is not the correct component for the assembly (col. 16, lines 45-61).

Regarding claim 16, Boegh-Petersen discloses the method of claim 15 wherein the frequency-specific component is taken from a stock that comprises a plurality of frequency-specific components, the method further comprising: rejecting the entire stock of frequency-specific components if a predetermined number of frequency-specific components in the stock are successively rejected for connection (col. 16, lines 45-61, when the predetermined number is one).

Regarding claim 17, Boegh-Petersen discloses the method of claim 15 further comprising: searching for the frequency-encoding feature at a plurality of locations on the frequency-specific component; and determining an orientation of the frequency-specific

component based on a location at which the frequency-encoding feature is found (col. 10 and 11, lines 66-16).

Regarding claim 18, Boegh-Petersen discloses the method of claim 17 further comprising: identifying a reference point and a reference direction on the frequency-specific component; forming a number of vectors beginning at the reference point, the vectors being of substantially equivalent length and forming pre-defined angles with respect to the reference direction; and searching for the frequency-encoding feature at the ends of the vectors (Fig. 8 and 11; col. 14, lines 35-58).

Regarding claim 19, Boegh-Petersen discloses the method of claim 18 wherein each vector includes an end that terminates at a corner of a square (Fig. 8).

Regarding claim 20, Boegh-Petersen discloses the method of claim 18 further comprising: determining a rotational position of the frequency-encoding feature; and distinguishing which of a plurality of features is indicated by the frequency-encoding feature based on the orientation of the frequency-specific component (col. 14, lines 35-58).

Regarding claim 21, Boegh-Petersen discloses the method of claim 15 further comprising: detecting an outline of the frequency-specific component; locating the frequency-encoded feature based on the detected outline of the frequency-specific component; and determining an orientation of the frequency-specific component based on the located frequency-encoded feature (col. 10 and 11, lines 66-16).

Regarding claim 22, Boegh-Petersen discloses the method of claim 15 wherein the frequency-specific component comprises a circuit board (col. 2, lines 25-34).

Regarding claim 23, Boegh-Petersen discloses the method of claim 22 wherein the

frequency-encoded feature comprises a conductive material (col. 2, lines 25-34).

Regarding claim 24, Boegh-Petersen discloses the method of claim 15 wherein the frequency-specific component comprises a mechanical component (Fig. 8 and 9).

Regarding claim 25, Boegh-Petersen discloses the method of claim 24 wherein the mechanical component comprises a cover that covers a mounted component (Fig. 8 and 9).

Regarding claim 26, Boegh-Petersen discloses the method of claim 15 wherein the frequency-encoded feature comprises a bore (Fig. 8 and 9).

Regarding claim 27, Boegh-Petersen discloses the method of claim 15 wherein the frequency-encoded feature comprises an indication printed on the frequency-specific component (col. 8, lines 5-26).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boegh-Petersen U.S. Patent 4,707,657.

Regarding claim 28, Boegh-Petersen discloses a frequency-specific component for a high-frequency assembly comprising: a machine-detectable feature on the frequency-specific component (col. 2 and 3, lines 66-11).

Regarding claim 29, Boegh-Petersen discloses a manufacturing apparatus for the

automatic manufacture of a high-frequency assembly comprising: a placing apparatus to place one or more components on a high-frequency assembly, wherein at least one of the components comprises a frequency-specific component (col. 2 and 3, lines 66-11); a controller operatively connected to the sensor and configured to: receive a signal from the sensor responsive to the detection of the frequency-encoded feature; and control the placing apparatus to place the frequency-specific component on the assembly, or to reject the frequency-specific component based on the received signal (col. 16, lines 45-61).

Boegh-Peterson discloses using a frequency-specific component (circuit board) for a high frequency application (col. 2 and 3, 66-11), but does not expressly disclose detecting a frequency-encoded feature associated with the frequency-specific component that indicates an operating frequency of the frequency-specific component.

Official notice is taken that detecting an operating frequency of the circuit board to ensure that the circuit board qualifies to be used in a high-frequency application was well known at the time the invention was made in the analogous art of circuit manufacturing and assembly.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to ensure that the circuit board qualifies to be used in a high-frequency application. One of ordinary skill in the art would have been motivated to do this since circuit boards inherently have operating frequencies and in order for the circuit board to be correctly used in a high-frequency application the operating frequency needs to be a high frequency.

Therefore, it would have been obvious to modify Boegh-Petersen to obtain the invention as specified in claim 28 and 29.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES R. KASENGE whose telephone number is (571)272-3743. The examiner can normally be reached on Monday through Friday, 8:30 - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on 571 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CK
January 29, 2009

/Charles R Kasenge/
Examiner, Art Unit 2121